

# ***NAVY MEDICINE***

November-December 1999





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# NAVY MEDICINE

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**COVER:** Following the devastating August earthquake, residents of Degirmendere, Turkey, return to reclaim what little undamaged property is left. The Navy responded to the tragedy with humanitarian assistance. Story on page 5. Photo by JO1 Robert Benson.



# Joint Task Force Full Accounting

**T**he missions of Navy medicine, its hospital corpsmen, and officers vary greatly, from providing health care afloat to caring for the Marines in the field. You will also find Navy medicine cooperating in a joint environment during a humanitarian or hostile crisis. However, few realize the mission the Navy is conducting jointly with her sister services in the jungles of Southeast Asia.

Military medical professionals selected for Joint Task Force Full Accounting spend 2 months at a time assisting in the recovery and identification of remains of over 2,000 American servicemen still classified as missing in action in Vietnam, Laos, and Cambodia. Navy independent duty corpsmen and general medical officers work alongside their medical counterparts of the Army and Air Force in arduous conditions. Many have been hand selected because of operational experience in the field and represent some of the most dedicated medics in Navy medicine.

Thousands of untouched booby traps, mines, and unexploded ordnance litter the jungles of Southeast Asia and as such the search and recovery team treads lightly with members of the Explosive and Ordnance Disposal (EOD) Teams. Not only do medical personnel work to recover remains but their secondary mission is to care

for the personnel assigned to them. This includes the capability to stabilize and conduct a rapid medical evacuation from the area should anyone be injured in an accidental mine detonation. Because Vietnam is also host to many tropical diseases, the majority of military personnel have been immunized prior to their arrival in Asia.

HMC(SW) Shawn E. Wolfe, a Great Lakes independent duty corpsman, volunteered to serve in Joint Task Force Full Accounting in 1999. He prepared a diary of events that make up a large part of this article.

## **Preparing to Leave the U.S. September 1998-April 1999**

The Plans, Operations and Medical Intelligence Department at Naval Hospital Great Lakes, IL, acted as direct liaison between the command and Bureau of Medicine and Surgery (MED-27) in charge of Operational Readiness. They indicated a need for an independent duty corpsman to serve in Vietnam from April to June 1999 as part of Joint Task Force Full Accounting. From a short list HMC(SW) Wolfe was selected because of operational experience in Central America, Somalia, and at sea. In February 1999 HMC(SW) Wolfe was flown to Brooks Air Force Base in San Antonio, TX, to attend the Global Medicine Course.

*I received orders to the Global Medicine Course which is the Air Force's version of the Tropical Medicine Course. In two weeks we covered a variety of tropical and communicable diseases. As a Preventive Medicine Technician and Independent Duty Corpsman I was familiar with the material and awaited orders to deploy.*

*What was really useful was meeting several IDCs who had been part of Joint Task Force Full Accounting and I picked their brains on clothing, equipment and how to prepare for the deployment and what to expect.*

*I learned that the Joint Task Force is divided into an Investigative Element and Recovery Element. The Investigative Element involves investigating sites prior to undertaking recovery operations. The Recovery Element is the actual painstaking work of unearthing remains. Physical conditioning would be a must for both elements since it required long treks into the jungle.*

In early April 1999 HMC(SW) Wolfe received orders and he subsequently found out from SFC Mike Swam, USA, of the Central Identification Laboratory, that he would be part of the Recovery Element going into Vietnam.



HMC(SW) Wolfe talks with villagers of Quong Mei...

## Pre-Deployment Briefs in Hawaii

On 21 April he was on his way to Hawaii where the Army conducted further orientation training for those on their way to Southeast Asia. Part of this training included cultural briefs and blood transfusion training. The personnel were also issued gear and given further training in tropical and independent duty medical operations by Army Special Forces Medics.

The morning starts with a Medical Threat Brief, which outlines the primary medical concerns in the area of operation. Malaria is a high point of discussion. Counter-terrorism, identification of key members, standards of conduct and cul-

tural briefs followed. We were informed that from Hawaii we would be flown to Thailand and medical evacuation routes and processes would be discussed there. We learned that we were the 55th Joint Field Activity, our actual mission title, and it was composed of two Investigative Elements, six Recovery Elements and a Research and Investigation Team. My team (Recovery Element) was composed of six Army, two Air Force, three Navy personnel and a civilian forensic anthropologist.

Today (Day 6) is the first time we are told what our site will look like and the expectations for the mission. We will be excavating a flooded

crash site (crater). The site was dug up last December 1998 looking for remains. Vietnamese witnesses said they recalled a burial of Americans near the crash site. The crash was caused by a U.S. Air Force RF-4 Phantom reconnaissance fighter which was shot down in 1969. The forensic anthropologist then sensitized us about the debris commonly found. Using photos, he introduced us to what human remains and bones looked like after a quarter-century in the tropical jungle.

The Central Identification Laboratory in Hawaii (CILHI) is responsible for identifying remains of every servicemember lost in a 20th century conflict.



Day 7 in Hawaii at the Blood Bank at Tripler Army Medical Center, the teams received a complete list of all personnel deploying and their blood type which is tested and cross-matched. In essence, they would each be walking blood banks in the dense jungles of Vietnam. On the 8th day the team medics reported to the Navy Environmental and Preventive Medicine Unit No. 6 (EPMU-6) for a malaria briefing and were issued snake-bite kits, as access to anti-venom in the jungle would be impossible.

### Enroute to Vietnam via Thailand

On 30 April the teams made a 48-hour trip to Utapao, Thailand, for the final preparation phase of the deployment into Vietnam.

*Arrived Utapao, Thailand 2 May 0615 (Local). Palletized equipment stored on the airbase and teams traveled to Pattaya Beach for additional orientation and acclimatization. Adrenaline is high and morale is up, all of us wanting to start work. One day of medical briefs conducted by Joint Task Force Full Accounting Medical Liaison, discusses specifics of medical evacuation plan as well as availability of medical assistance from local physicians.*

The 55th Joint Field Activity left from Thailand to Danang and upon arrival broke down their pallets and loaded them onto trucks for transportation the next day to Quang Tri Province, north of Danang.

*Departed Danang through the Hi Phong Pass, along the coast to Hue. From Hue continued to the town of Dong Ha. Our party consisted of 12 American Military Team Members and Vietnamese Officials. The Vietnamese Officials would be our constant companions and their numbers would grow to include village, district and provincial offi-*



... and sifts through dirt for human remains.

*cials who would help in translation and enhance the accomplishment of our mission. Dong Ha would be our base of operations for the next month.*

*Today we visit the site for the first time. The team was split with half surveying the site and the other half breaking out the equipment, hoses and water pumps needed for excavation. My team of Army 1st LT Paradine, Sergeant First Class Swam, SSGT Mustafa the Explosive and Ordnance Disposal Expert, CT13 Tran, our linguist and SM3 Zoetelmoyer the communications officer. The crater is being used by the Vietnamese as a fishpond and rice grows on the edges of the crash*

*site. The RF-4 Phantom crashed and made a 12 meter by 12 meter hole in the ground. We had to negotiate using our Vietnamese liaisons to reimburse villagers for loss of crops, land and any restoration before excavating in the crater. We also used the villagers to assist us in setting up and excavating the site. They were paid a daily wage.*

### Starting Work

The team would make great use of the villagers from Quong Tei. They performed the majority of the construction and were quite ingenious with their use of bamboo and other jungle material to build rest areas and create a 4-meter grid over the crash



crater. Sign language, pictures, manuals, and CTI3 Tran, the Navy linguist, served for communication. Sunday is a day of rest in Vietnam so the first real day of work began on 10 May.

*Our first screening day! We began after lunch. Every shovel load would be placed in buckets and taken to a screening rack. This apparatus trapped the dirt in mesh wire and it was very much like panning for gold. This continued for hours and the team had to be careful as the site could easily collapse on itself from the weight of water and soil. Initially, plastic, wire, metal and cloth would be found. The team rotated from digging to transporting the soil to panning for any sign of human remains. The Vietnamese men did much of the heavy labor and the women generally looked through the mesh for remains. These ladies oftentimes made significant discoveries because of their attention to detail.*

The work went on hour by hour. On 12 May bits of a flight suit and parachute appeared. HMC(SW) Wolfe had his first experience digging in the crater, heavy and wet with each shovelful of slimy mud sucking him inside the earth. Sandbagging became an issue. The hole was in danger of collapsing and had to be reinforced. On 15 May groundwater flooded the crater and major thunderstorms were expected. The good news was that more survival gear fragments were located, but still no remains.

Continuing danger that the entire excavation could collapse required the team to build retaining walls. Members were initially discouraged but their spirits were lifted considerably after they found a bone fragment at the end of the day. The anthropologist assessed that it was a femur or humerus but of no value for a DNA analysis.

*18 May (Day 8): We located a large rib fragment, which ought to contain identifiable DNA. Things are looking up and every load contains debris and survival equipment. Our joy turns into panic as the crater now is completely unstable and it is pouring rain constantly. We feel that the site may be lost any moment. We maintain a 50 minute work and 10 minute rest schedule.*

*20 May: Team spending the next two days clearing mud and returning to our six feet working depth after the collapse of the crater walls. Very Frustrating!*

*22 May: We hit bottom beyond seven feet at a gravel streambed, and stumble on two large twisted sections of the aircraft. We work to bring the rest of the four meter grid down to equal depth.*

25 May was the last day for the team. They packed out and closed the site. They had located 12 probable human bone fragments, a tooth, and dog tag. The team members were all satisfied that they had enough information to bring this Air Force officer home and make a positive identification. The remains would still have to be analyzed in Hawaii.

### **Leaving Recovery Element and Going to Investigative Element**

The U.S Army Command element in charge of the mission notified Chief Wolfe that he would remain behind to be rerouted to Hue to serve with the Investigative Element. An independent duty corpsman who had been involved in an accident needed to be replaced. This involved traversing the jungle tree line following up on crash reports involving Americans missing in action.

They flew from Hue to the Laotian border and through the Au Chau Mountains looking for a helicopter crash

site. After 3 hours of searching the jungle there still was no sign of the helicopter. The countryside was peppered with craters from bombs dropped in the 1960's and 1970's. The next day, 27 May, the team flew to Montagnard country. The Montagnards are dark-skinned people of mixed ethnic origin who inhabit the highlands of Vietnam and Laos. HMC(SW) Wolfe was dropped off with a team for a 3-kilometer hump. Upon locating the crash site, the chief found a bolt from an M16 rifle, the team found a web belt still buckled shut, and witnesses produced a .38 revolver, watch, and boot they claimed was found in the helicopter crash site.

Based on this promising evidence the team recommended recovery operations be conducted at this crash site. Records, the testimony of villagers, and evidence recovered from the site indicated the possibility that the remains of two missing Americans might be in the area.

### **Conclusion**

HMC(SW) Wolfe left Vietnam on 4 June and, needless to say, he has been yearning to return. He has also encouraged other independent duty corpsmen to volunteer for this mission. Watching stories about Vietnam on television and reading about the conflict have taken on a new meaning to Wolfe and the hundreds of men and women who have participated in Joint Task Force Full Accounting. Their mission is to see that no servicemember remains unaccounted for. □

—Story by HMC(SW) Shawn E. Wolfe, Leading Chief of the USS *Tranquillity* Branch Medical Clinic, Recruit Training Center, Great Lakes, IL, and LT Youssef H. Aboul-Enein, MSC, Plans, Operations and Medical Intelligence Officer, Naval Hospital Great Lakes. Photos by SPC(PJ) Chris Licking, USA.



# Surgical Response Team Assists Earthquake Victims



PH2 Virginia Schaefer

**T**wo days after the 17 Aug 1999 earthquake that killed more than 13,000 people in Turkey, a U.S. Navy medical team flew to Istanbul to help treat the thousands more who were injured.

The team, better known as the Surgical Response Team (SRT), comprises 22 medical personnel that includes doctors, nurses, an oral surgeon, a dental technician, hospital corpsmen, and communications specialists from Naval Hospital Naples, Italy. The SRT's main mission is to provide short-term emergency surgery to patients on a battlefield or after a natural disaster.

"There was a defined need for a team that could be mobilized quickly and be on the scene to provide emergent surgical capabilities until further assets could be diverted into the area," said LCDR Thomas Goaley, officer in charge of the Surgical Response Team.

The SRT flew to Turkey aboard an Air Force C-141, arriving in Istanbul late on 19 Aug. Trucks met the plane at the airport and, once loaded, moved the SRT and all its gear more than 70 kilometers to Izmit, Turkey, near the earthquake's epicenter.

After a few hours of sleep, everyone began setting up camp in the dusty parking lot of a soccer stadium. By noon on 20 Aug, the triage and surgery tents were up and ready to receive patients.

**A member of the Naval Hospital Naples Surgical Response Team tends to a child pulled from the rubble of her home after the earthquake in Izmit, Turkey.**





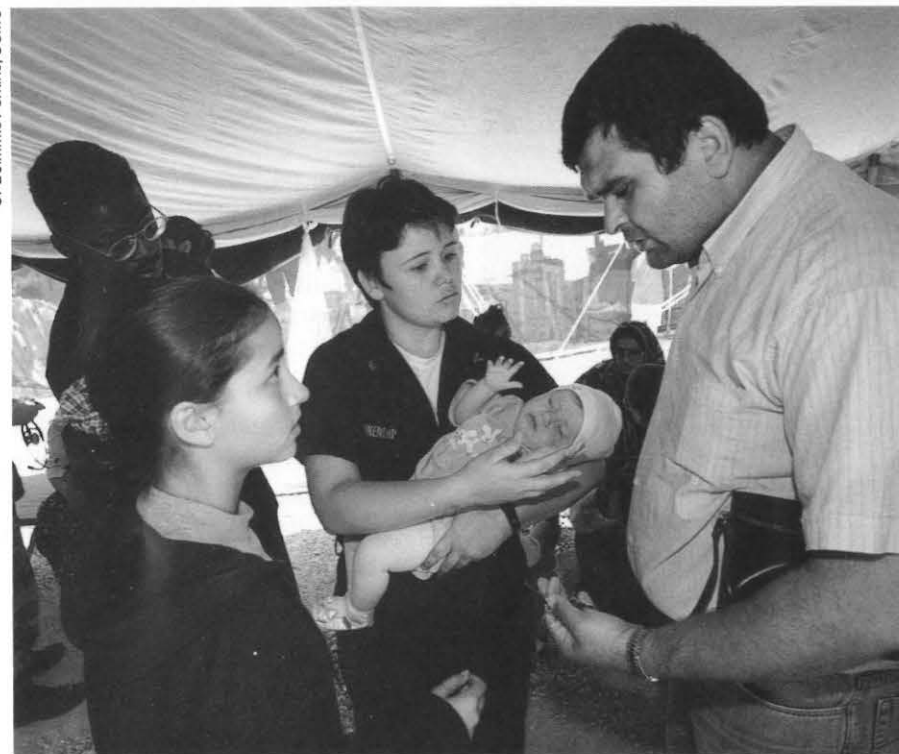
**Above:** A flattened residential building shows the extent of damage to most of the dwellings of Izmit. **Right:** CDR Bruce Potenza, MC, USNR, examines surgical instruments on USS *Kearsarge* (LHD-3). Potenza, whose specialty is trauma and critical care, was activated from Fleet Hospital Unit 23 at the Madison, WI, Naval Reserve Center. The *Kearsarge* Amphibious Readiness Group left Spain bound for Izmit, Turkey, to render humanitarian assistance to victims of the earthquake.

"From the time we got the official written orders, we were on site within 24 hours," said Goaley.

Each of the SRT's 22 members pulled together to get the camp operational and keep it running smoothly. The teamwork continued throughout the deployment. From setting up tents to cleaning out restrooms and seeing



CWO2 Seth Rossman



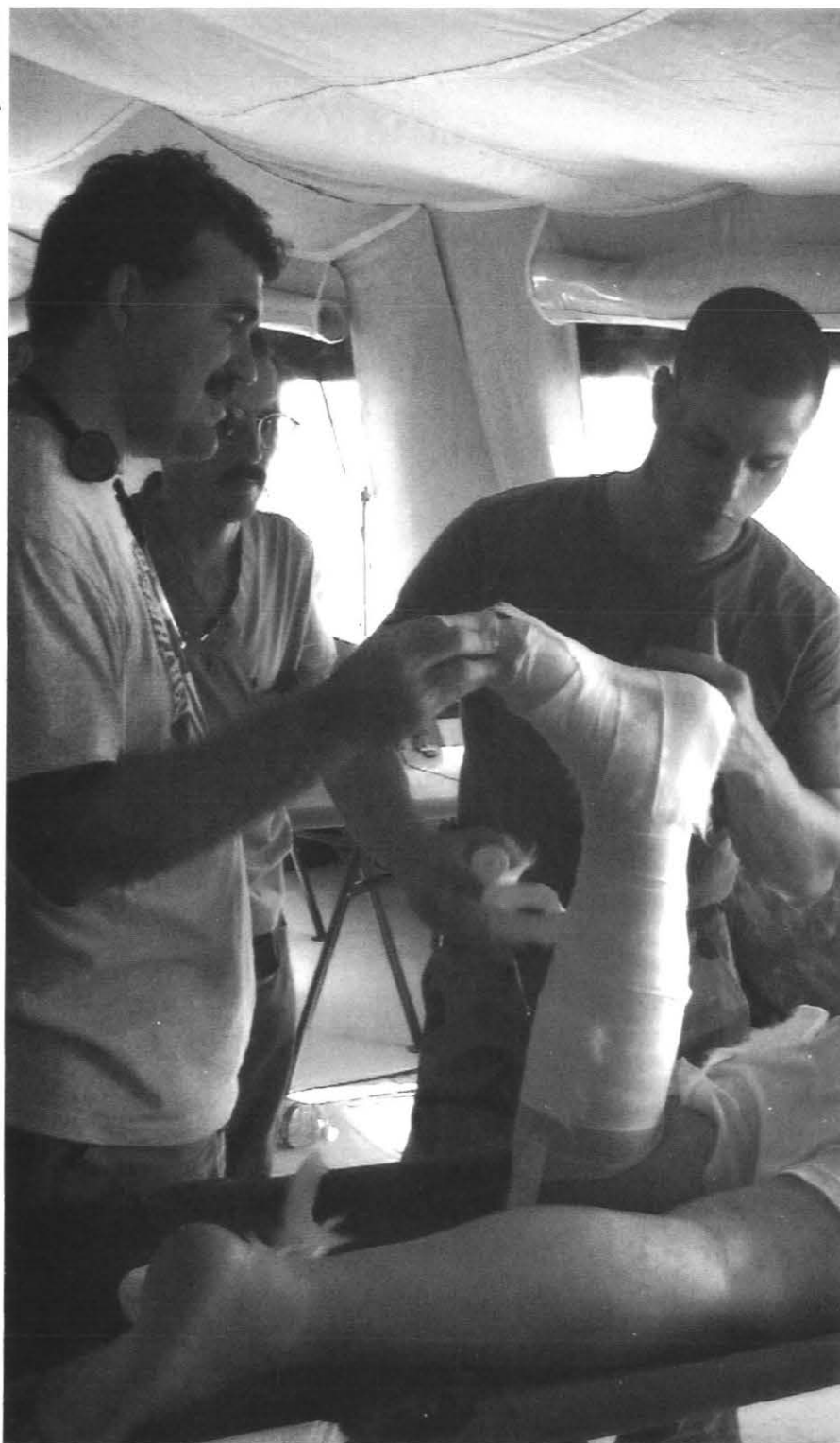
**Above:** Residents and other volunteers attempt to rescue victims from the earthquake in Izmit. **Left:** A Turkish father seeks care for his infant daughter. Holding the child is HM3 Erin Blankenship from the 26th Marine Expeditionary Unit.

patients, when the time came everyone did his or her part to get the job done.

"Teamwork is very important in a situation like this. If your guys aren't together it can get real hostile out there because you're working long hours and the weather conditions are bad. It's a big strain on everybody," said HM3 Christopher Parker, a hospital corpsman with the Surgical Response Team. "You need to pull together and be a team and that's very important."



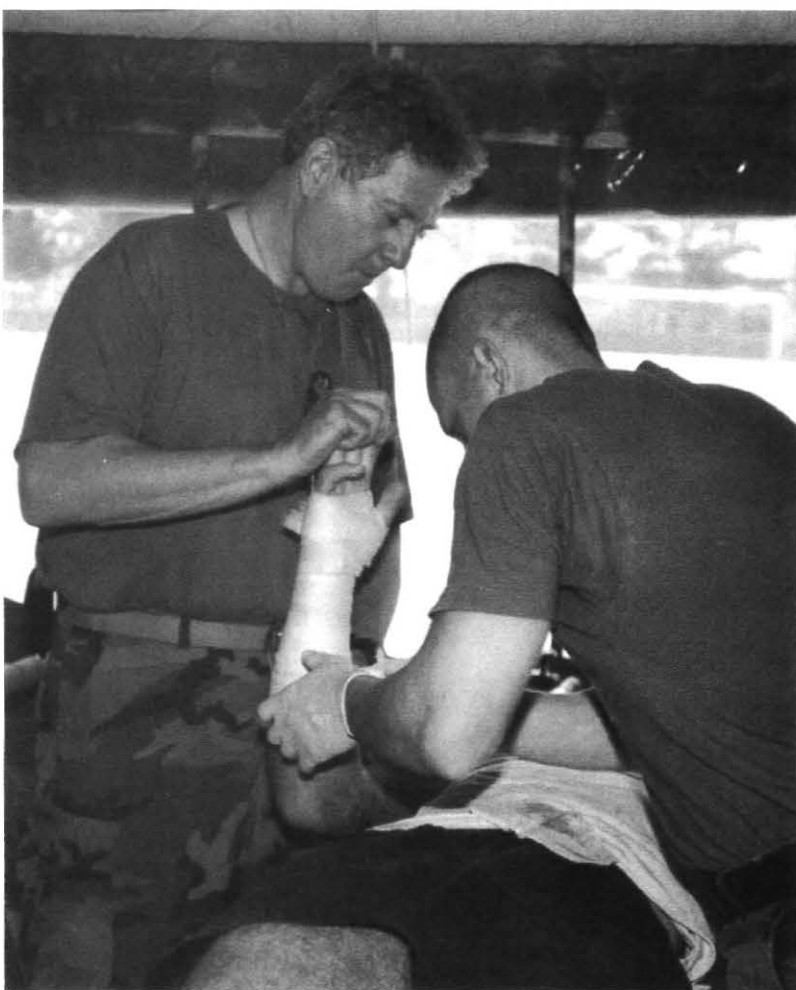
*Below:* HM2 Jonathan Baum finishes a cast to immobilize the ankle of a Turkish man injured in the earthquake. Baum was part of the Surgical Response Team from Naval Hospital Naples that assisted the earthquake victims. *Right:* HM2 Shepley Reimer and LT Jaime Salazar listen as a Turkish translator (right) describes the woman's injury.



The first patient showed up later that evening and after that, a steady stream flowed through the camp until the SRT pulled out on 25 Aug. Their first surgery for the deployment (and in the team's 7 years of existence) happened the following day.

A Turkish man had sustained a crush injury to his left forearm during the earthquake. Swelling from the injury cut off all feeling and blood to and from the left hand. The swelling had to be relieved soon or the man's arm would begin to die.

"When our orthopedic surgeon and I saw him we concluded that there was a compartment syndrome going



PH2 Virginia Schaefer

Members of the Surgical Response Team from Naval Hospital Naples care for a victim of the earthquake.

on in his left forearm. The surgery was done here on-site with our anesthesiologist providing a block to the arm to numb it and allow us to perform the surgery, opening up all the compartments and relieving the pressure," said Goaley. "So far, we've been able to close two of the three fasciotomies. All motor and sensory function has returned to his arm and it will be normal once the wounds are closed. We saved his arm. It's always a wonderful feeling to make that impact on somebody's life."

Although the surgery was significant because it was the first done in the field, it was also significant be-

cause it was performed in very hot weather and without electricity due to a broken generator.

"We had no electricity in the operating room and it was very warm in there," said CAPT Michael Strauss, a reservist who was doing his 2-week reserve time in Naples when the call came in to go to Turkey. "Once we got started, though, everything else was incidental and things went very smoothly."

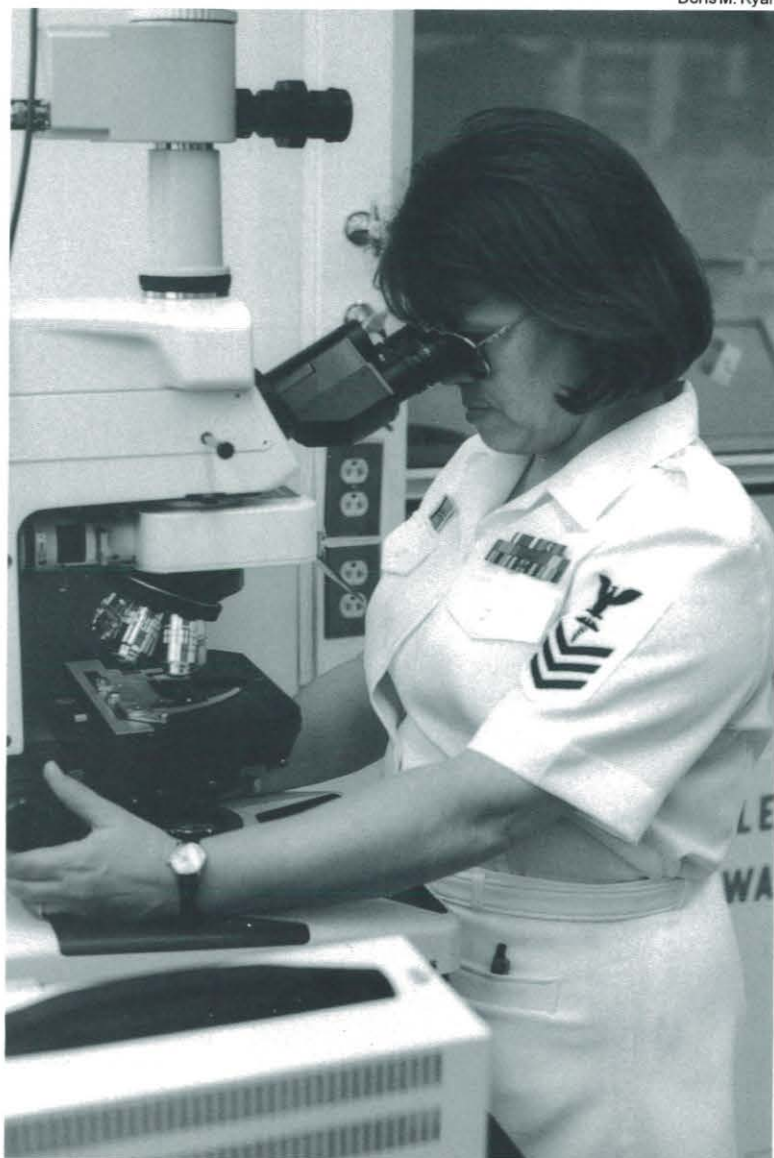
Although this is the first time the Surgical Response Team has been deployed in an emergency situation, the team performed well, meeting all expectations.

"It's helped us identify things we can do better, it's helped us identify things that we planned for and maybe we don't need quite as much. It's helped give feedback to the whole system," said Goaley. It's not just Naval Hospital Naples that has a Surgical Response Team, it's Naples, Rota, plus the Army and the Air Force that, as far as lessons learned in these types of situations, are going to benefit from that information and from this deployment. □

—Story by JO1 Ray Boone, Navy Mediterranean News Service.



# Navy Researchers Working to Develop a Vaccine for Dengue Fever

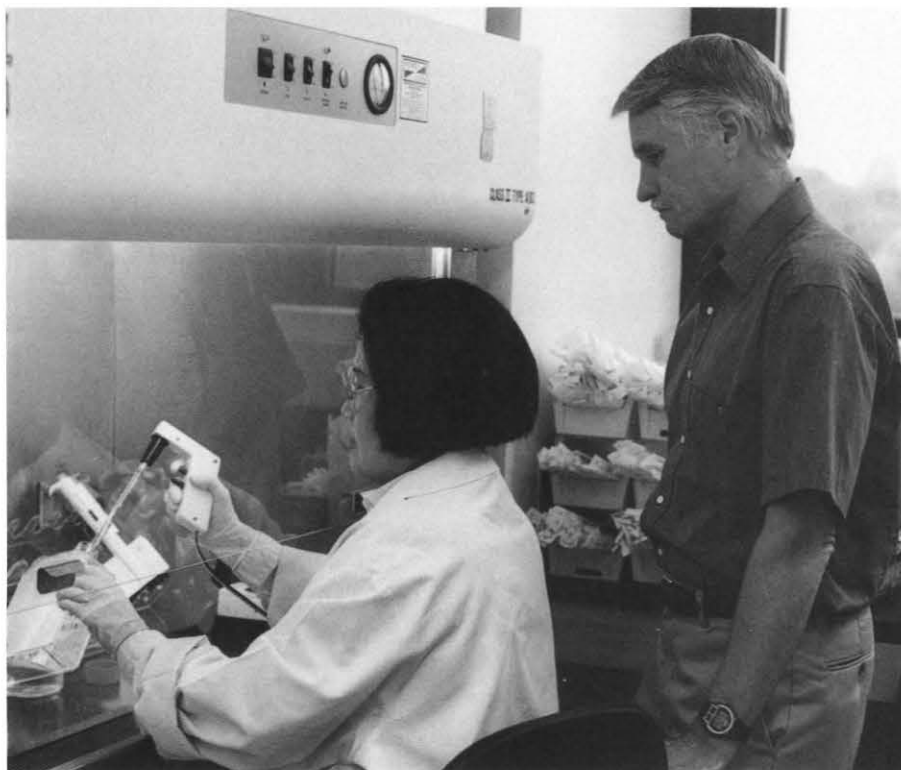


HM1 Vicky Walker, a lab technician in the NMRC Viral and Rickettsial Diseases Department, examines cells infected with dengue virus.

Seldom seen in the United States but reported in over 100 countries, dengue causes acute febrile illness in the tropical and subtropical areas of the world. Its global distribution is comparable to that of malaria, a parasitic infection. Dengue is caused by one of four closely related virus types called Dengue-1, Dengue-2, Dengue-3, and Dengue-4 and is found in Asia, Africa, and the Americas.

An urban mosquito with a preference to feed on humans transmits the disease. The viruses survive in a cycle that involves humans and the female *Aedes aegypti*, a day-biting mosquito. When the mosquito bites a person infected with dengue, the insect becomes infected and acts as a carrier of the virus. The disease spreads when mosquito-carriers bite healthy individuals who then become hosts for the virus.

Curtis Hayes, Ph.D., head of the Infectious Diseases Directorate at the Naval Medical Research Center (NMRC), Forest Glen, MD, points out, "This is one of the most important infectious diseases we are studying. It's right up there with malaria and the enteric diseases like travelers' diarrhea. The mosquitoes that spread dengue are not only in the jungle and rural areas but are also found in urban areas. This means the mosquitoes are



Ravithat Putvatana, lab technician, transfers dengue virus infected cell cultures in a biosafety cabinet while Dr. Hayes, head of the Infectious Diseases Directorate, observes.

U.S. personnel. When the Army put troops in Haiti for Operation Uphold Democracy we saw the same thing. Dengue was the leading cause of hospital admissions for febrile disease.”

It is possible that a Sailor, Marine, or Soldier deployed to dengue-endemic areas over the expanse of a military career could develop four dengue infections. Dengue causes two types of disease—dengue fever and dengue hemorrhagic fever. Dengue fever is a self-limiting and very uncomfortable illness but not fatal. Dengue fever should not be confused with dengue hemorrhagic fever, a separate disease associated with hemorrhagic complications, shock, and sometimes death.

Dr. Hayes said, “Presently there is no vaccine and there is no cure. Treatment is supportive which means rest,

found in the military base camps during the day where deployed personnel are going about their normal routines. Unlike other mosquitoes that feed on animals with people as incidental hosts, the mosquito that carries dengue prefers people. There are probably over 100 million cases of dengue infections around the world each year.”

Dr. Hayes went on to add, “When we deploy to areas where dengue occurs, we see dengue disease in the troops. Dengue makes a lot of people very sick in a short time and they can’t do their jobs. With this high epidemic capacity, dengue directly affects the mission. Historically, the numbers in World War II for dengue infection were high in the Philippines, Asia, and the western Pacific. In Vietnam, dengue turned out to be the main cause of

illness in troops admitted to the hospital who were initially diagnosed with fever of unknown origin. When we went to Somalia for Operation Restore Hope, dengue was again one of the main causes of febrile disease in

Doris M. Ryan



Doris M. Ryan

Dan Ewing, an NMRC lab technician, determines the nucleotide sequence of the dengue virus genome.



Navy researcher, Irving "Phil" Phillips (center) from NMRC, conducts a serological survey from a dengue outbreak in Ampama in the Amazon jungle in Peru. The lab research at NMRC is complemented by field studies at the Naval Medical Research Center Detachment in Lima, Peru, and the Naval Medical Research Unit No. 2, Jakarta, Indonesia.



fluids, acetaminophen, and possible hospitalization."

According to Dr. Hayes, "Prevention of dengue infections would alleviate a major health concern for the military and resolve a major public health problem in the tropical and subtropical areas of the world. Each of the four dengue types causes dengue fever and the more severe illness, dengue hemorrhagic fever. Infection with any one type of dengue appears to confer life-long immunity to that type, but not to the other types. Individuals sequentially infected with a different dengue type (a secondary infection) appear to be at a higher risk for developing the more severe disease. In essence, the disease is different the second time around."

Developing a vaccine to protect military personnel against the four dengue viruses is complicated. Dr. Hayes points out one of the major obstacles, "With a secondary dengue infection an individual is more susceptible to dengue hemorrhagic fever. We think this is happening because the antibodies that developed from the first infection somehow make the individual more susceptible during the second infection. We have to make a vaccine that will protect against all dengue virus infection. An immunization for only one or two of the viruses could actually inflate the risk of serious disease."

The research team at NMRC is using DNA vaccine technology to

produce candidate dengue vaccines. Traditional vaccination technology uses a weakened or killed version of the disease-causing agent to engage the body's immune system to protect the individual. DNA vaccine technology differs from traditional vaccines in that just the DNA coding for a specific component of a disease-causing agent is injected into the body.

Following the FDA's new drug development process, Dr. Hayes' team is currently involved in preclinical trials. Under FDA requirements researchers evaluate the drug first through laboratory animal testing. Successful results from the preclinical testing will lead to clinical trials beginning with Phase I clinical studies in the next 2 years.

Dr. Hayes outlines the process, "We take pieces of the dengue virus genome and using the DNA approach we produced candidate vaccines against all four types of dengue virus. Using a mouse model, we have had success inducing neutralizing antibodies, a marker for indicating immunity. These results show some degree of

protection. But one problem we are faced with; there isn't a good animal model for dengue. Animals challenged with live dengue virus don't get sick, only people do. We can use animals to test for immune response, but we have no way of knowing how the vaccines will work in people."

The researchers currently have four separate vaccines in development, one for each virus. During the next few months, the Dengue 1 and Dengue 2 DNA vaccines will be tested in the preclinical studies using nonhuman primates. According to Dr. Hayes, "If these trials are successful, and I have every reason to be optimistic, we will conduct a second trial with all four dengue vaccines. If the second trial is successful we will be able to move to a phase one human trial in about 2 years." □

—Story by Doris M. Ryan, Medical Research and Development Division (MED-26), Bureau of Medicine and Surgery, Washington, DC.

# The Right Thing to Do

VADM George P. Nanos, Jr., USN

America's technology is awe-inspiring and only can be matched by its enterprising and talented people. This is true of the U.S. Navy and Marine Corps, our 21st century fleet, and our highly skilled and motivated Sailors, Marines, and civilians.

Those of us at the Naval Sea Systems Command (NAVSEA) are dedicated to engineering, building, and supporting America's fleet. And, we want it to be the most capable and safest force we can create. That requires some very innovative engineering and a focus on hazards of all types.

At the 1999 Sea, Air & Space Symposium, RADM James Lisanby (Ret.) asked VADM Lockhard and myself what we were doing to support Sailors and Marines who serve on aircraft carriers. That question focused on a growing awareness of high noise environments and their hazards. In aircraft carrier design history, noise abatement was addressed with the technologies available at the time. Today, new and better data indicate an even greater need to address this issue with new technologies developed recently.

Many of us, led by senior enlisted advisors and attentive officers like my command chaplain, are especially attuned and informed about the hazards of high noise environments. The steady

and intermittent noises created by launching and recovering aircraft 24 hours a day produces deafening noises from jet aircraft engines at full power, arresting gear machinery, arresting cable slap, catapult launches, waterbrakes, and much more.

As we push SSN-21 and DD-21 to be the quietest ships in the world, we must apply our talents to mitigate the high noise levels found on aircraft carriers and improve both living and working conditions at sea. Acoustic technology is providing many more solutions today, especially in the commercial arena. We must accept the challenge to incorporate these technologies in a systematic fashion to benefit our Sailors and Marines. Quiet fans and motors, new insulation materials, laminated sheet metal, better joiner systems, and effective communication ear pieces are all being used commercially in active noise control efforts. These and many other examples demonstrate solutions that are available, and now is the time for us in naval engineering and acquisition to apply them to future constructions as well as during major maintenance periods, where possible. We can and should make improvements.

There are many reasons for us to engineer much-improved environments, which protect hearing. First, it



is simply the right thing to do. Second, responsible leadership requires us to provide safe and healthful living and working conditions for our people far from home. This allows us to recruit and retain our very best. However, most importantly, our Sailors trust us to provide not only the best tools, but they entrust us with their lives and the impact their work has on the rest of their lives.

Americans expect their Navy and Marine Corps to be the best and that means doing everything we can to protect our men and women in uniform. Reducing the dangers of a high noise environment is a very important priority. We know how to do this within the weight constraints of a 100,000-ton aircraft carrier. Making engineering improvements is the right thing to do and those actions will earn our leadership the trust of those who depend on us. □

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VADM Nanos is Commander, Naval Sea Systems Command, Arlington, VA.



# Sexual Behavior and Risk Reduction Counseling: A Component of Clinical Management

CDR Linnea M. Axman, NC, USN

Unintended pregnancy and sexually transmitted diseases (STDs) in adolescents and young adults continue to be major public health problems in the United States. The rates for pregnancy and STDs remain high, despite recent reports by the Centers for Disease Control and Prevention (CDC) that indicate fewer high school students are engaging in behaviors that place them at risk.<sup>(1)</sup>

The majority of all pregnancies in the U.S. are unintended ("pregnancy not wanted at time of conception irrespective of whether or not contraception was being used").<sup>(3)</sup> A recent estimate places the rate of unintended pregnancies in the U.S. as high as 60 percent.<sup>(4,5)</sup> The child of an unwanted conception is at greater risk of low birth weight, stillbirth, neural tube de-

fects, and a variety of congenital disorders including fetal alcohol syndrome.

Navy pregnancy rates parallel civilian pregnancy rates for age with the highest rates in the group aged 20-24 years (19 percent). In 1996, 23 percent of the officers and 65 percent of the enlisted women that became pregnant did not plan to do so. In the same study, women serving in deployable commands (aboard ship) when they became pregnant suffered more fetal loss than those serving on shore duty.<sup>(6)</sup>

STDs are a tremendous health and economic burden on the people of the U.S. More than 12 million Americans are infected with STDs each year. Three million of these Americans are teenagers. STDs may cause serious, even life-threatening compli-

cations including cancer, infertility, ectopic pregnancy, miscarriage, stillbirth, preterm birth, and low birth weight infants.<sup>(7)</sup>

STDs comprise the largest group of reported diseases in the Navy. As of June 1998, chlamydia and gonorrhea were the most frequently reported STDs as well as the most frequently reported infectious diseases overall.<sup>(8)</sup>

Unintended pregnancy, STDs, and their sequelae affect both men and women on active duty, intruding upon the work environment, affecting the health and well-being of the Sailor, and ultimately affecting mission accomplishment.

Talking to adolescents and young adults about risk-taking sexual behavior and sexual decision making is essential for preventing unintended pregnancy and STDs. Uniform tools that

guide the clinical encounter will assist health care providers in their discussion and assessments of sexual risk-taking behavior, an essential first step in risk reduction and the prevention of unintended pregnancy and STDs.

### Risk-Taking Sexual Behavior

Risk-taking sexual behavior places adolescents and young adults at risk for STDs and pregnancy. "Risk-taking sexual behavior" is commonly assumed to mean behavior that puts an individual at risk for HIV infection. There are a variety of sexual behaviors that can place an individual at increased risk for HIV infection and other STDs. These behaviors include initiation of intercourse at an early age, greater number of current and lifetime sexual partners, type of intercourse (vaginal, anal, and oral, both receptive and insertive), increased frequency of sexual intercourse, having sex with partners at risk for HIV and other STDs (IV drug users), and lack of barrier contraceptive use(9) (Table 1). Risk-taking sexual behaviors that place an individual at increased risk of exposure to STDs and HIV overlap with those behaviors that place an individual or couple at risk for unintended pregnancy. Table 2 identifies the overlap between behavior that places an individual at risk for exposure to STDs and unintended pregnancy. Unfortunately, no single method of contraception provides maximum protection against STDs and unplanned pregnancy in sexually active individuals.(7)

Although not considered sexual behavior, alcohol and illicit drug use have been identified as behavioral

**Table 1. Behaviors That Place an Individual at Increased Risk of Exposure to STDs/HIV**

- Initiation of intercourse at an early age
- Greater number of current and lifetime sexual partners
- High-risk sexual partners
- Increased frequency of sexual intercourse
- Type of intercourse
- Lack of barrier contraceptive use

risk factors for unintended pregnancy and STDs. Secrecy is another contributing factor that places individuals at risk of exposure to STDs and unintended pregnancy. Secrecy may be a passive "by-product" of the difficulties in discussing the intimate aspects of life, or secrecy may be active as a direct result of efforts to suppress information regarding certain aspects of sexuality ("Don't ask. Don't tell.")(2)

There is strong evidence that clear communication between a patient and practitioner will provide a substantive link between a person's beliefs and their willingness to comply with, modify, or ignore advice and treatment.(10,11) Tools and techniques that seek to explore risk-taking sexual behavior in adolescents and young adult men and women are essential to

preventing unplanned pregnancies and STDs.

Risk-taking sexual behaviors are modifiable. Benefits conferred by changing these risk-taking behaviors include decreased likelihood of acquiring STDs and decreased risk of unintended pregnancy. Benefits that will extend beyond decreased risk of STDs and unintended pregnancy include, but are not limited to, decreased risk of cervical cancer, sterility, and fetal wastage.

An important strategy for reducing spread of STDs is to identify and treat infected individuals and their contacts. An understanding of how individual behavior contributes to exposure and transmission is necessary. A complete discussion of the theories of individual motivation to adopt or reject health protecting behavior is beyond

**Table 2. STDs and Unintended Pregnancy: The Overlap**

- Initiation of intercourse at an early age
- Greater number of current and lifetime sexual partners
- Increased frequency of intercourse
- Choice of contraceptive method



**Table 3. A Framework for Sexual History Taking (14)**

1. Have you had a sexual experience with another person in the last year?
2. (If yes,) With how many different people this year?
3. What can you tell me about your sexual life before this last year?
4. Have you ever had a sexually transmitted disease of any kind?
5. Have you ever shared needles or injection equipment with another person for any reason?
6. Have you ever felt that a sex partner put you at risk for any reason?
7. What do you do to protect yourself from AIDs?
8. What do you do to protect yourself from unintended pregnancy?
9. Is there anything else about [you] that I need to know to ensure good medical care?

the scope of this paper, but includes perception of risk, susceptibility, knowledge and motivation to change, and self-efficacy.(7)

### **Risk Reduction**

Risk reduction counseling and education of patients during routine clinical encounters and during evaluation for STDs and pregnancy are extremely important components of clinical management. Focused counseling has substantial potential for changing sexual risk-taking behaviors, particularly for adolescents, young adults, and other high-risk groups.(7)

Navy health care providers are required to discuss birth control methods and the ability of different contraceptive methods to protect against STDs

during the Annual Health Maintenance Examination for Women.(12) A similar directive is not available for men; however, the *Clinician's Handbook of Preventive Services* recommends that all men should receive contraceptive counseling to include STD prevention as part of periodic health examinations or during acute care visits of a related nature (such as evaluation for and treatment of STDs).(13) This recommendation is reinforced on the Adult Preventive and Chronic Care Flow Sheet (DD-276) which identifies "safe sex" as an area for preventive health care counseling.

The ability of the health care provider to obtain an accurate sexual history is crucial in prevention and control efforts. BUMED Notice 6320

directs that "Health care providers should follow current Centers for Disease Control (CDC) guidelines for the screening and treatment of STDs. Counseling should be provided regarding risky sexual behavior and prevention of unplanned pregnancies, and STDs including HIV."(12)

The chapter "Sexuality and Reproductive Health" in *Contraceptive Technology*, 16th edition(14) provides guidance in obtaining a sexual history and is recommended by *The 1998 Sexually Transmitted Disease Treatment Guidelines* for this purpose.(1) The questions listed to assist in history taking are reported to take 2-5 minutes to ask. Hatcher realistically cautions readers to be "guided primarily by [their] understanding of literacy skills and cultural feelings in [their] patient population about open sexual discussion."(15) This is especially important in an active duty military population. Table 3, taken from *Contraceptive Technology*, 16th edition, has been modified for an active duty military population.

Recognizing that even this number of questions may seem cumbersome in busy medical treatment facilities, Hatcher recommends asking at a minimum "What do you do to protect yourself from AIDs?"(16) However,

**Table 4**

- If you only have time to ask three questions, reasonable choices might be:
- ⇒ *Have you had a sexual experience with another person in the last year?*
  - ⇒ *(If yes,) What do you do to protect yourself from AIDs?*
  - ⇒ *(If yes,) What do you do to protect yourself from unintended pregnancy?*

this question presumes that all patients are currently (within the last year) sexually active, and this question alone does not accurately assess pregnancy risk. A more complete but still less time-consuming alternative to Table 3 is offered in Table 4.

Despite time and administrative constraints that providers may feel, accurate STD/unintended pregnancy risk information must be provided to patients. Table 5 lists the information that a patient should receive regarding risk-taking sexual behavior and the risk reduction (prevention) of unintended pregnancies and STDs.

## Conclusion

Risk-taking sexual behaviors that place an individual at increased risk of exposure to STDs overlap with those behaviors that place an individual or couple at risk for unintended pregnancy.

Talking to adolescents and young adults about risk-taking sexual behavior and sexual decision making is essential for preventing unintended pregnancy and STDs. Tools and references have been presented to guide health care providers through the discussion of those intimate aspects of the AD member's life that are often cloaked in secrecy.

The information presented here will assist Navy health care providers as they seek to obtain sexual histories and provide much-needed risk reduction information to our fighting force. The goal of our efforts must be reduction of behaviors that contribute to unintended pregnancy and STDs, and the ultimate outcome, a Fit and Healthy Force.

**Table 5. Risk Reduction Behavior. What Every Patient Should Know (17)**

- Consider nonpenetrative activities (outercourse)
- Consider postponing sexual intercourse with potential partners
- Consider abstinence
- Reduce your number of sexual partners
- Know the STD/HIV status of your partner
- Know your partner's sexual and drug history
- Communicate expectations for safer behavior before initiating sexual activity
- Refuse sex with partners who refuse to use condoms
- Avoid unprotected vaginal, oral, and anal intercourse
- Avoid alcohol (or drug use) before or during sex
- Use barrier protection every time you have intercourse (oral, anal, vaginal)
- Use an additional form of contraception to maximize protection against unintended pregnancy

## References

1. Centers for Disease Control and Prevention. *The 1998 STD Prevention and Treatment Guidelines*. Atlanta, GA: Centers for Disease Control and Prevention; 1998.
2. Brown SS, Eisenberg L, eds. *The Best Intentions*. Washington, DC: National Academy Press; 1995.
3. Ibid., p 22.
4. Hogue CJ. Missing the boat on pregnancy prevention. *Issues in Science and Technology*. 1997;19(4):41-46.
5. Rubin R. Birth control failure. *U.S. News & World Report*. March 3, 1997:66-68.
6. Thomas PJ, Uriell ZA. *Pregnancy and Single Parenthood in the Navy: Results of a 1997 Survey*. San Diego, CA: Navy Personnel Research and Development Center; 1997.
7. Eng TR, Butler WT, eds. *The Hidden Epidemic*. Washington, DC: National Academy Press; 1997.
8. Rendin RW, Morrow RC, DiBiao PE, eds. *Navy Disease Reporting System*. Norfolk, VA: Navy Environmental Health Center; 1998.
9. Fahey JL, Flemming DS. *AIDS/HIV Reference Guide for Medical Professionals*. Baltimore, MD: Port City Press Inc; 1996.
10. Jackson LE. Understanding, eliciting, and negotiating clients' multicultural health beliefs. *Nurse Pract*. 1993;18(4):30-43.
11. McSweeney JC, Allan JD, Mayo K. Exploring the use of explanatory models in nursing research and practice. *Image*. 1997;29(3):243-248.
12. BUMED Notice 6320. *Annual Health Maintenance Examination for Women*. Washington, DC: Bureau of Medicine and Surgery; 1998.
13. U.S. Department of Health and Human Services. Put prevention into practice. *Clinician's Handbook of Preventive Services*. Washington, DC: U.S. Government Printing Office; 1994.
14. Hatcher RA, Trussell J, Stewart F, Stewart GK, Kowal D, Guest F, Cates W, Policar MS. *Contraceptive Technology*. New York, NY: Irvington Publishers Inc; 1994.
15. Ibid., pp 30-31.
16. Ibid., p 30.
17. Georgetown University Medical Center. *STD/HIV Risk Assessment and Counseling Guide*. Sponsored by U.S. Air Force, Wilford Hall Medical Center, HIV Prevention and Evaluation Center, Walter Reed Army Institute of Research, and Henry M. Jackson Foundation for the Advancement of Military Medicine. San Antonio, TX: Wilford Hall Medical Center; 1997. □

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# Mother's Mentor Program at Naval Hospital Rota, Spain

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**T**he U.S. Naval Hospital at Naval Station Rota, Spain, has had as many as 12 single, pregnant Sailors at any given time. Added to this number are those pregnant women who are married, yet whose husbands are deployed and are unavailable because of deployment. If these women were stationed in the United States, they would be able to contact a family member (mother, grandmother, aunt, etc.) for postpartum support. But it can be very expensive to call one's family, especially on a frequent basis if living overseas.

It is to address the above critical need that the Social Work Department at U.S. Naval Hospital Rota developed a new service, the "Mother's Mentor" Program, to provide support to these single mothers, and mothers whose husbands are deployed. The program has its roots in the "Welcome Baby" Program which was co-sponsored by the Naval Hospital and the Family Service Center at Naval Base Charleston, SC, in 1982.

## **Program Goal**

In Rota our goal was to target the single, pregnant Sailor who was isolated from her nuclear or extended family in order to provide support and encouragement for her after she delivers her baby. New mothers whose husbands are deployed or TAD are also eligible for this program; eligibility is very liberal, as we want to help anyone who desires this assistance. The *real* goal is to prevent child abuse/child neglect, as a direct result of this positive interaction between the "Mother's Mentor" volunteer and the new mother.

According to one definitive source, "A number of parental and family characteristics have been identified as

risk factors or risk markers for child physical abuse: poor social support, low economic status, single parent family, and unplanned/unwanted pregnancy, but abuse is usually the result of multiple interacting factors.(1) The author also states that, "Social isolation increases the risk of abuse,"(2) and "A poor understanding of normal child development and poor anger control are two commonalities among abusive parents.(3) To allay the mother's frustration, anxiety, and isolation is precisely the outcome that this new mother-volunteer interaction produces.

## **How It Works**

The Social Work Department head coordinates the program, assisted by a family nurse practitioner. Volunteers (usually mothers or grandmothers) first go through the American Red Cross orientation training to become registered volunteers. Afterward they receive training from the program coordinators.

Everyone on this base who is single and pregnant is followed closely by the OB/GYN nurse. This nurse will refer all such individuals to the hospital social worker, who will explain the "Mother's Mentor" Program to her. If she desires that a volunteer be provided, the social worker will then contact the next mentor on the list. This volunteer will then contact the patient, introduce herself, and establish a rapport with the new mother. The mentor will give the new mother her home telephone number, and encourage her to call night or day if she needs to talk about anything related to motherhood, and having a new baby at home. This telephone connection between the mother and her mentor is the very heart of the program.

## The Charleston Experience

This new mother-volunteer interaction worked extremely well in the "Welcome Baby" Program. Many new mothers received valuable support from their volunteers when their own families were not available during a critical time. In many stressful situations, being able to contact her volunteer by telephone had the amazing effect of reducing the mother's stress level and frustration, preventing a potential child abuse/neglect tragedy. Moreover, volunteers in Charleston acknowledged that their participation in that program was a tremendously rewarding and gratifying experience. With jobs for family members being limited at many OUTCONUS duty stations, volunteers are readily available and volunteering can be a most satisfying way to use one's time while making a significant impact in the life of a new mother.

## Development of the Rota Program

A needs assessment was carried out by contacting the OB/GYN nurse through whom all single pregnant individuals are referred. She revealed that we had around 12 patients in this category at the time, but that the numbers had gone as high as 20 single, pregnant Sailors in the past.

Before formally launching the proposal, care was taken to ensure that there was no similar program already in existence on this base. The Navy-Marine Corps Relief Society nurse does go into most homes following the birth of a baby, but her hours are generally 0800-1600, Monday thru Friday. Likewise, the New Parent Support Team (NPST) also goes into many homes of new mothers, yet their hours are 0800-1700, Monday thru Friday. By contrast our mentor volunteer is available to the new mother by phone, at night, and even weekends.

Program endorsement by the hospital's chain of command was mandatory. Approval by the base legal officer was likewise essential. Presenting the idea of the "Mother's Mentor" Program to the area ombudsmen, the Oakleaf Spouses' Club, and other base-wide spouses' organizations was extremely important. A strong volunteer base can be built from these contacts.

The "Mother's Mentor" volunteers were trained by the social worker and the family nurse practitioner. It was emphasized that the volunteer is not to *give* medical advice, nor is she to *make* a referral. Her role is to talk with the new mother in a supportive, understanding manner. Should anything unusual or alarming come up during this discussion, the mentor should contact either the social worker or the family nurse practitioner immediately.

A list of volunteers' names and home phone numbers was prepared and posted in the social worker's office. The

staff in OB/GYN and family practice were informed that if one of their patients is married, pregnant at the 28-week mark or beyond, and is interested in having a "Mother's Mentor" volunteer, then the staff member should notify the social worker who will contact the volunteer. This is especially for the patient whose husband is deployed around the time that she gives birth. Even though the target population of this program is the single, pregnant individual, accessing a mentor will not be limited to those patients; if a woman requests a mentor, that request will be honored.

## Mother's Mentor Release of Information Form

As stated above, at Naval Station Rota a new parent and her baby may be visited by the Navy-Marine Corps Relief Society nurse, and the NPST representative. This Release of Information form is provided to allow the visiting nurse or NPST representative to speak with the new mother's mentor volunteer about any pertinent information regarding the visit.

If the mother signs the form, the form is given to the social worker/program coordinator.

## Release of Information Form

I give the Navy-Marine Corps Relief Society nurse, and/or the New Parent Support Team representative permission to release social or medical information about my care to my Mother's Mentor volunteer.

DATE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

WITNESS: \_\_\_\_\_

## Conclusion

This is a prototype primary prevention program that addresses a very special "at risk" population, with a goal of preventing child abuse and neglect.

## References

1. Retford DC. Guide to Clinical Preventive Services, Baltimore, MD: William & Wilkins; 1996:556.
2. Ibid.
3. Ibid.

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# REDCOM One Nurses Find Job Satisfaction

LT Julie A. Pierce, NC, USNR

The annual 2-week active duty training period (AT) is a requirement of Naval Reserve Nurse Corps officers in the Selected Reserve. Because the active duty forces increasingly depend upon the reserves, Naval Reserve nurses must maintain a state of constant readiness. While important data on job satisfaction of military nurses has been obtained, there is still a limited amount of information on Naval Reserve Nurse Corps officers. There have been no studies found investigating job satisfaction of Naval Reserve nurses while on active duty for their annual 2-week training period.

The purpose of this article is to report the findings of levels of job satisfaction of Naval Reserve nurses during their annual 2-week AT. The research question addressed in the study was: How satisfied are Naval Reserve Nurse Corps officers during their annual 2-week active duty training period?

With the many changes in the military and the downsizing trends of the active duty forces, there has been more and more dependence placed upon the reserves for manpower and specialized skills. Knowledge gained about job satisfaction during the required 2-week active duty period from this study is important for retention, morale, and quality work of Naval Reserve Nurse Corps officers.

## Theoretical Framework

Maslow's Hierarchy of Human Needs Theory provided the theoretical framework to explore job satisfaction of Naval Reserve Nurse Corps officers. Maslow's theory has been applied to job satisfaction in industry as well as nursing. The theory is closely linked to motivation because it was assumed that highly motivated employees would be highly satisfied employees.

In Maslow's view, humans are motivated by needs. There are five levels of needs in Maslow's hierarchy. Physiological needs, such as air, water, food, and sleep, are essential for survival and are the most powerful of all needs. Safety needs encompass security, stability, protection, order, and freedom from fear and anxiety. Love and belonging needs may be met by joining a group or club. Love needs may also be met by having an intimate relationship with someone or with people in general. There are two types of esteem needs; esteem derived from others and self-esteem. Self-actualization is a need that can be defined as using all our abilities and fulfilling our own potential capacities.

The lowest and strongest need must be met first before the second level need emerges. Humans are not motivated by needs all at once. The greatest need at any moment is

dependent upon which of the other needs have been met. Maslow's needs can be separated into higher and lower needs. The higher needs are not required for survival but are needs to enrich life in psychological and social ways. Maslow's Hierarchy of Needs Theory applies directly to job satisfaction. Based on the theory, job satisfaction can be measured to see if different needs are being met.

The McCloskey/Mueller Satisfaction Scale (MMSS) measures eight types of satisfaction that support three theoretical dimensions based on Maslow and Burns. Extrinsic rewards, scheduling, and family and work balance are areas identified with safety needs/rewards. Co-workers and interaction are belonging needs or social rewards. Professional opportunities, praise/recognition, and control/responsibility are areas identified with esteem needs or psychological rewards. These areas are measured to identify rewards that keep nurses on the job.

## Methods

**Study Design.** This study was a descriptive quantitative design utilizing a written questionnaire measuring job satisfaction. Data was obtained by the use of a convenience sample consisting of 127 Naval Reserve Nurse Corps officers from 21 different medical units in the Naval Reserve Readiness Command Region One (New England region). Subjects were required to have completed at least one 2-week period of active duty training in a clinical setting.

Upon command approval, a demographic profile and job satisfaction tool was sent to 16 Naval Reserve Centers to be distributed to all Navy nurses in REDCOM One. The MMSS was utilized as the tool measuring job satisfaction. This scale consisted of 31 items capturing eight types of satisfaction consistent with Maslow's Hierarchy of Needs. Although several questions on the scale were not applicable to a 2-week working period, this tool was chosen because it was tested for reliability and validity, and it can be used in a variety of nursing settings.

**Data Analysis.** Data analysis was conducted using descriptive statistics. The MMSS job satisfaction instrument was designed to measure nurses' satisfaction with extrinsic rewards, scheduling, family and work balance, co-workers, interaction opportunities, professional opportunities, praise and recognition, and control and responsibility. Each item is rated on a five-point Likert scale with five = very satisfied, to one = very dissatisfied.

## Results

**Demographics.** Of 127 questionnaires sent to 16 Naval Reserve Centers in New England, 54 percent (n=68) responded. Out of the 68 questionnaires, four were used for demographic data only as they had not yet performed an annual training period in a clinical setting and one was not useable because of insufficient data.

The majority of respondents were aged 40-49 (43.3 percent), while 35.8 percent were aged 30-39, and 17.9 percent were aged 50-59. Only 3 percent (n=2) were aged 20-29. The most represented rank of respondents was lieutenant commander (35.8 percent), then commander (26.9 percent). Forty Naval Reserve nurses held baccalaureate degrees and 22 had completed their master's degree.

Twenty-five percent of subjects responded that they had 11-15 years experience as a RN and 24 percent had over 26 years experience. Experience as a Naval Reserve Nurse Corps officer varied. Nineteen respondents had 6-10 years, 15 had 11-15 years, and 14 nurses had 0-5 years experience. Similarly, 20 nurses reported they had completed an annual 2-week training period for 6-10 years, 16 had completed 0-5 years, and 14 had completed 11-15 years. This variation between the number of years as a Naval Reserve Nurse Corps officer and number of annual training periods completed may have been caused by waivers taken, transfers, or newly acquired members who were not required to perform the training their first year.

The majority of nurses also reported performing AT in an ambulatory care setting (34 percent) and working in the role of a staff nurse (42 percent).

**Statistical Findings.** Based on the results of the MMSS, Naval Reserve Nurse Corps officers are satisfied with their jobs while performing their annual 2-week AT. In all 31 items questioned, results showed all averages, medians, and modes greater than three. Keeping in mind the values of the Likert scale for this tool, these results indicate greater than neither satisfied nor dissatisfied in each category applicable to the 2-week period.

Specific questions relating to satisfaction with extrinsic rewards had an average of 4.23 for salary and 4.22 for benefits. These numbers indicate that respondents were greater than moderately satisfied in these categories.

Scheduling showed a response to hours worked with an average of 4.19. Flexibility in scheduling hours decreased slightly to 3.79 with a median and mode of 4.0, while the



opportunity to work straight days resulted in a mean of 4.27 with a median and mode of 5.0.

Extrinsic rewards, scheduling, and family and work balance are encompassed by Maslow's safety needs. Although satisfaction was found with extrinsic rewards and scheduling, results could not determine any values for family and work balance because the questions regarding childcare facilities and maternity leave were not applicable based on a short 2-week work period.

Maslow's love and belonging level encompasses the categories of co-workers and interaction opportunities assessed by the MMSS. Respondents rated their immediate supervisor 4.03, nursing peers 4.19, and physicians they worked with 4.06. Delivery of care had a mean of 3.79 with a median and mode of 4.0. Opportunities for social contact at work was 3.68, opportunities for social contact with colleagues after work was 3.46.

Satisfaction of respondents is not as high in the esteem/recognition level as it is found at lower need levels. The MMSS focused on questions relating to professional opportunities, praise and recognition, and control/responsibility. Opportunities to interact professionally with other disciplines rated an average of 3.75. Control over what goes on in your work setting was 3.28. Opportunities for career advancement had a mean of 3.57. Recognition for an individual's work from superiors and peers was rated identical with a mean of 3.69 and a median and mode of 4.0. The amount of encouragement and positive feedback also received high results with a mean of 3.71 and median and mode of 4.0.

Nurses were satisfied with their amount of responsibility, control over work conditions, and participation in organizational decision making. The means for these areas were 3.94, 3.28, and 3.42, respectively.

## Discussion

In conclusion, this exploratory study was designed to measure the level of satisfaction of Naval Reserve Nurse Corps officers with their annual 2-week active duty training.

The results from the MMSS have shown overall satisfaction based on the three theoretical dimensions of safety rewards, social rewards, and psychological rewards. This overall satisfaction in these three categories indicates that nurses in the Naval Reserve are meeting their needs according to Maslow in their roles during their annual training period.

Results showed that Navy nurses had the highest level of satisfaction with safety rewards, which includes salary, benefits, and scheduling. This indicates that security, stability needs were met.

As needs move to a higher level but are not essential to survival, levels of satisfaction decreased. Regarding social rewards, results found nurses to be satisfied with co-workers but less satisfied with opportunities for social contact and delivery of care. These factors may indicate an area for improvement.

Psychological rewards were measured with questions about professional opportunities, praise and recognition, and control and responsibility. Results showed that esteem needs were also met but had decreased to a lower level of satisfaction than both safety and social rewards. The highest level of satisfaction was seen for professional opportunities, praise and recognition, and responsibility. Control over the work setting and working conditions were found to be the least satisfying factors of the annual training period.

Overall, Naval Reserve nurses are satisfied with their annual 2-week AT. As discussed, needs are being met in three levels including safety, social, and psychological rewards. Specific areas noted with less satisfaction include opportunities for social interaction and control in the work setting. These factors may be investigated further to determine its effect in future studies.

This study was important because there have been no previous studies found investigating levels of satisfaction for Naval Reserve nurses during their required annual training periods. Data found from this study may be useful for enhancing experience gained during the AT requirement and further studies on Naval Reserve nurses.

## Bibliography

- Hale C. Measuring job satisfaction. *Nurs Times*. 1986;82(5):43-46.
- Maslow AH. *Toward a Psychology of Being*. 2nd ed. New York, NY: Van Nostrand Reinhold Co; 1968.
- Maslow AH. *Motivation and Personality*. 2nd ed. New York, NY: Harper & Row; 1970.
- Mueller CW, McCloskey JC. Nurses' job satisfaction: a proposed measure. *Nurs Res*. 1990;39(2):113-117. □

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# Navy Trauma Training

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**T**rauma training in the Navy and in the other services has been a center of focus for as long as can be remembered. It has also been understood for a long time that trauma care as practiced in a military setting is different than that practiced in an urban trauma center. There is a difference in injury types, in the austere conditions where medical care is delivered, and in the frequency of multiply injured patients presenting simultaneously and requiring triage.

The evolution of military operations has magnified the issue of trauma care readiness. Footprints of military operations are smaller and more rapid. Consequently, trauma care must assume a similar posture. Rapid transportation of patients from battlefield to definitive medical care will likely take longer than previously. Trauma skills must be far better than previously. Emphasis on team training must be a high priority.

Desert Storm (1990-1991) amplified interest in trauma training as many reservists trained in civilian trauma centers observed lack of adequate trauma training and experience among health care providers in theater. Congress passed legislation ordering the Department of Defense (DOD) to identify and implement means to improve trauma training in all services.

Within the Navy there have been many initiatives. The original DOD demonstration project was at Naval Hospital Portsmouth. General surgeons gained added trauma experience working on a monthly basis at the Norfolk General Regional Trauma Center, Sentara Hospital. Currently, general surgeons can receive added trauma experience through monthly rotations at civilian trauma centers in Seattle, San Diego, and Jacksonville. Navy flight surgeons working with the Marines can rotate at Martin Luther King-Drew Medical Center Trauma unit in Los Angeles. Hospital corpsmen can gain added trauma experience at Scripps Memorial Hospital La Jolla, CA, and at MLK-Drew in Los Angeles. To my knowledge there are no programs offered exclusively to nurses.

## **Trauma Training Coordinator**

Because these projects and others are unfortunately limited to those who receive training and falls short of delivering team training, in April 1999 Surgeon General VADM Richard Nelson created the Trauma Training Coordinator for the Navy position. This new position has a unique job description.

The Trauma Training Coordinator:

- provides professional knowledge and expertise, and advises BUMED on the implementation of new DOD policies concerning combat trauma sustainment training,
- aids in sound management decisions related to Navy medicine's wartime readiness mission,
- provides liaison for Navy medicine and interservice initiatives through the Defense Medical Readiness Training Institute (DMRTI),
- coordinates identification of the combat casualty care mission of all Corps,
- facilitates standardization of combat casualty care mission essential training,
- works closely with representatives from the different Corps chiefs, appropriate BUMED codes, and the specialty and technical leaders, and
- develops policy and guidance for the implementation of this training.

## **Current Projects**

*Joint Trauma Training Center (JTTC), Ben Taub General Hospital, Houston, TX.*

The Army established a trauma team training program at Ben Taub General Hospital, and ran its first group through the program for 1 month in September 1998. An additional group exercised there in February 1999. The Army team was an Army FST consisting of 20 health care providers, to include 3 surgeons, 1 orthopedic surgeon, 1 anesthesiologist, 6 nurses (2 OR, 2 ICU, 2 ER), and 8 medics (2 OR techs, 6 EMTs), and finally 1 MSC.



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Please let CDR Roberts know of your interest in being in this group.

In March 1999, all three Surgeons General voiced support for this program and a 1-year demonstration project during which 10 other teams from all 3 services could train for 1 month each (excluding December 1999 and July 2000.) The demonstration project officially started on 1 Sept 1999.

The Navy will send two teams. The first team will be composed of elements of FST 1 and 8 (West and East Coast) and will train during February 2000. Detailed analysis of the expense/benefit ratio will be made to determine if this kind of training should be expanded and made available for others. The Navy's second month is May 2000. We will send a team from Marine Corps assets (elements from Med Battalion, Pendleton.) We hope therefore to evaluate the benefits from both the blue and green sides.

*Martin Luther King-Drew Medical Center, Los Angeles, CA project*

MLK currently is accepting Marine Corps flight surgeons and corpsmen to rotate for 1 month on the trauma service. This program, developed by CAPT J. Rose, HQ Marine Corps, has been in existence for 2 years, and has trained approximately 20 flight surgeons and 40 corpsmen.

*Marine Corps far forward resuscitative surgery capabilities*

CAPT H.R. Bohman, Specialty Leader for General Surgery, has instituted a Medical Battalion program for hospital corpsmen designed to enhance their knowledge and skills of battlefield trauma principles. This course includes both a didactic and laboratory section.

## RROC (Readiness Re-engineering Oversight Committee, BUMED)

Presentations to RROC

22 June 1999 presentation

27 July 1999 presentation

Both of these presentations regarding Navy trauma training can be obtained by contacting CDR Lawrence Roberts.

## Navy Committee on Trauma (American College of Surgeons) activities

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## Other Courses:

ATLS, TNCC, BTLs, C4, Bushmaster, IDC Trauma Training, and PA Trauma Training

Contact your local SETD, or MTN for course dates/locations. For more information about Navy Trauma Training, contact our website at [www-nmcscd.med.navy.mil/support/trauma/index.html](http://www-nmcscd.med.navy.mil/support/trauma/index.html) □

Dr. Roberts is Trauma Training Coordinator for the Navy, Department of General Surgery, Naval Medical Center San Diego, CA 92134-50002.

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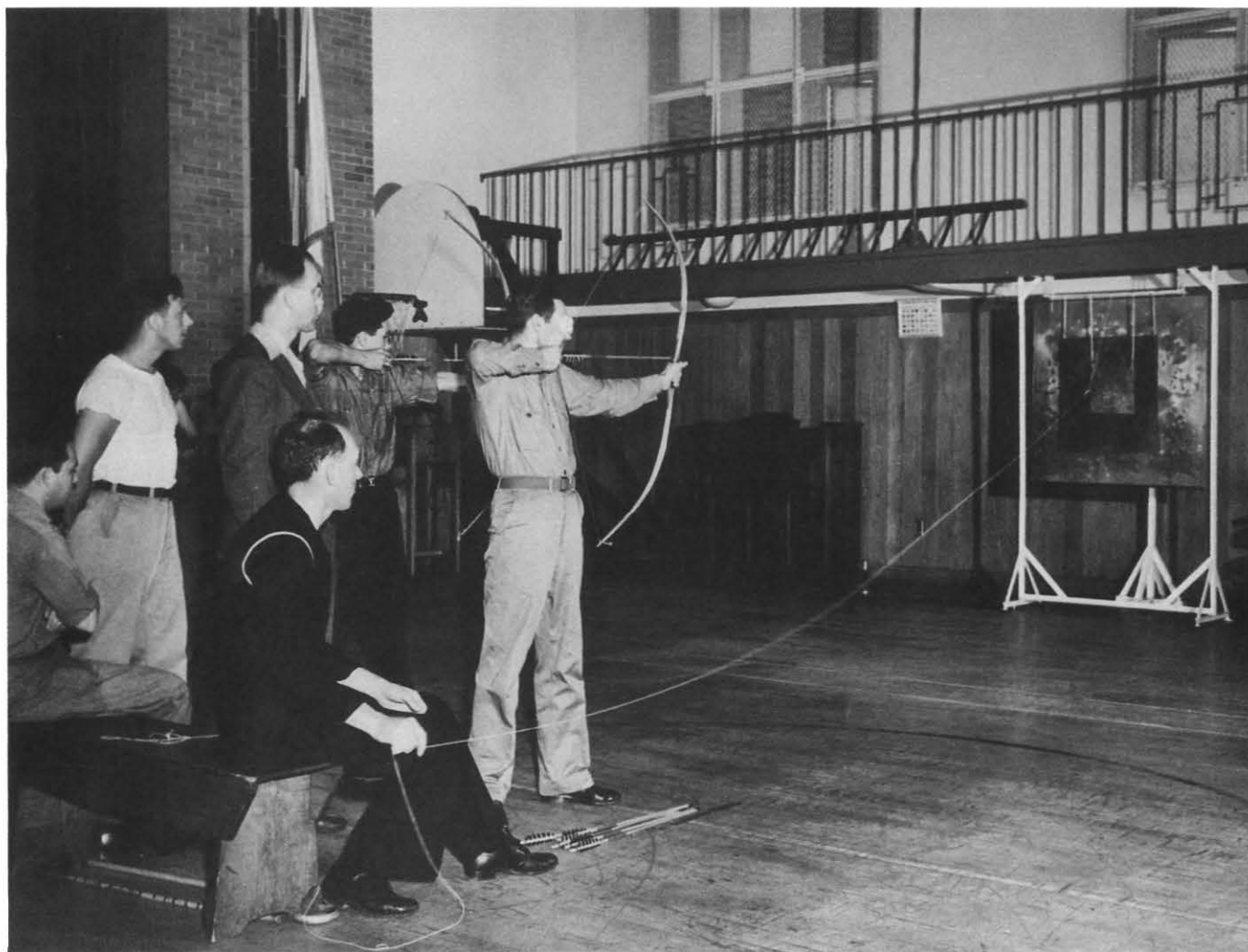
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## Navy Medicine 1945



BUMED Archives

At Naval Hospital Philadelphia, blinded and visually impaired Sailors and Marines fire at a target located for them by a sound device actuated by the seaman holding a line. This technique, designed to sharpen the senses of touch and hearing, was only one method used to help prepare war-injured veterans for civilian life.



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